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Teaching the Youngest Learners

Musical Experiences for Infants

Shannon de l'Etoile

For most children, musical instruction may not begin until 3 or 5 years of age or even older. However, musical experiences can offer numerous and significant benefits during the first weeks and months of a child's life. Infants can successfully learn *about* music and *through* musical experiences. The most meaningful and appropriate musical experiences for infants are based on a clear understanding of their purpose as well as insight into infants' perceptual capacities.

Infants' hearing is fully functional by the sixth month of gestation, thus as newborns they are curious and receptive listeners. Furthermore, they have brand new auditory equipment that has not yet been damaged by deafening marching band rehearsals or the latest iPod headphone technology. Consequently, infants' capacity for perceiving both tonal and rhythmic information is far more sensitive than that of adults (Fassbender, 1996). Musical sounds, such as songs, instruments, and recordings, should be presented at no more than mild to moderate dynamic levels. Loud, harsh, or unexpected sounds could induce startle responses or overstimulation and should therefore be avoided. As an example, while adults may find the sound of an ocean drum to be soothing, infants may perceive it as abrasive.

In the developmental window extending from birth until the end of the first postnatal year, music can serve multiple purposes. Through music, a teacher or caregiver can provide much-needed sensory stimulation to enhance central nervous system development. Music also promotes attending, imitation, arousal modulation, and exploration of the environment. Most importantly, when musical experiences are provided through live interaction with an adult, infants learn critical communication skills such as reciprocal dialogue, speech sounds, and how to associate sounds with objects, events, or feelings. Even before infants understand the meaning of words, they can comprehend the affective content of musical patterns (Nakata & Trehub, 2004). Thus, music provides a way for

infants to have synchronized interactions with caregiving adults, through which they learn to regulate their own emotions.

A critical variable to consider when designing musical experiences for infants is the issue of live versus recorded music. The outstanding benefit of live music is that it can be modified in the moment to accommodate ongoing fluctuations in infant arousal level and attention. One simple song can be sung in numerous ways (e.g., quickly, slowly, softly, loudly, at different pitch levels, with different words or sounds) as the occasion requires. The flexibility of live music thereby fosters an interactive experience between caregiver and infant, further allowing the infant to both influence and respond to his environment. Not surprisingly, research findings demonstrate that live singing is significantly more effective than recorded music at sustaining infant attention over time (de l'Etoile, 2006). Commercial recordings *can* be beneficial, if selected and implemented with care; however, most recorded music marketed for infants tends to be too fast, too complex, and in the wrong key for young listeners. Consequently, your singing voice and instrumental skills are your best tools for providing meaningful musical experiences for infants.

When singing *to* infants, establish face-to-face contact so the infant can associate oral movements with sound perception and can gather additional critical details through facial expression. Another option is to position the infant in your lap facing outward while the two of you look into a large mirror. Infants will attend to your face as well as their own during the musical experience. Songs for infants should be simple and repetitive, consisting of step-wise melodies within a limited range (roughly from the D above middle C to the A above middle C), as these elements best accommodate infants' perceptual capacities and listening preferences. Appropriate examples include "Twinkle, Twinkle Little Star" or "Row, Row, Row Your Boat." Sing the same song repeatedly. Experiment with tempo, volume, and accenting to determine which

elements elicit the best response. Change the song lyrics to include the infant's name or to narrate what he is doing (e.g., smiling, stretching). Singing simple sounds, such as vowels and bilabial consonants (e.g., *ba, pa, ma*), also provides appropriate stimulation. Infants tend to be far more interested in melodic and rhythmic patterns than the actual words you are singing.

When singing *with* infants, younger infants (i.e., those younger than 6 months) may not vocalize a great deal in response to live singing. Beyond 6 months, however, vocal behaviors should increase steadily as a result of anatomical maturation and perceptual development (Menn & Stoel-Gammon, 2005; Papousek & Papousek, 1991; Zemlin, 1998). Promote vocalizations by imitating or embellishing on infant sound production. Try repeating the infant's vocal pattern within a different pitch or volume level, or reversing the direction of the initial pattern. Sing a short pattern of tones using vowels or bilabial consonants, and wait for the infant to respond. While infants may not clearly imitate an adult's vocalizations until they're close to 12 months old, a vocal response produced at the right time is the critical issue. Through such interactions, you are introducing infants to musical patterns as well as teaching reciprocal dialogue.

Regarding movement to music, very young infants (i.e., birth to 6 months of age) benefit from "tickling" songs that involve gentle, playful physical contact in coordination with the song's rhythmic and harmonic structure (Feierabend, 1986). These simple songs can be sung or chanted, and they are critical for helping infants to develop the ability to predict future events. As an example from the author's own family repertoire:

"Bumble-Bee"

Bumble-bee went round the farm,
Sack o' taters under his arm
[slowly circle infant with finger while chanting these words]
And he went . . . *[dramatic pause]*
BZZZZZZZZZZZZ! *[gently tickle infant]*

Additional options for young infants include holding the infant close to your body while you move to the underlying beat of music, for example while you walk, dance, bounce, or sway. Both live singing and recorded tunes work well for this approach, through which the infant learns to associate movement with rhythmic sounds. For older infants who can sit up independently (i.e., 6 months and older), use "bouncing" songs (Feierabend, 1986). A favorite song from the author's own collection provides excellent structure for bouncing:

"Trot Trot"

Trot, trot to Boston,
Trot, trot to Lynn,
[bounce infant on each word while chanting rhythmically]
Better watch out . . . *[dramatic pause]*
Or you'll fall in!
[dip infant down and up quickly]

For infants of any age, try creating an "infant hammock" as a movement experience. With an infant safely positioned on a sturdy blanket, have two caregivers gently sway the infant to the underlying beat of live or recorded music. Many infants also respond well to "peek-a-boo" games using large parachutes or colorful scarves. Singing simple songs during such activities will assist the infant in predicting when his (or your) face will be revealed, thus establishing a playful and stimulating interaction. For example, sing "Where is Thumbkin?" or "My Bonnie" and replace the words "Thumbkin" and "Bonnie" with the child's name. Overall, these movement experiences help infants learn how to anticipate and respond to interactions with others. Additionally, these activities promote associations between movement and auditory stimuli, thus enhancing sensory integration as needed for coordinated movement and effective learning during later stages of development.

Musical instruments are an additional way to provide rich sensory input and promote attending and exploration in infants of all ages. Infants will benefit from hearing you play any kind of instrument (e.g., wind chimes, guitar, flute), again keeping in mind their auditory sensitivity. Try playing an instrument from different locations in the room or while you walk across the room. These strategies will encourage localization, visual tracking, and crawling. Additionally, allow infants to safely explore age-appropriate instruments such as drums or egg shakers. Think of nontraditional ways to use instruments, such as letting infants sit or lie down on a large drum while you play it or supporting them in jumping up and down on a sturdy drum following the steady beat of rhythmic music. While an infant lies on his back, prompt him to kick a tambourine or bell. Attach Velcro-strap bells to his ankles to further encourage sound production. Roll an egg shaker or small cabasa on his arms, legs, the soles of his feet, or across his back or abdomen. Use a simple, rhythmic song or tune to structure the experience so infants know when to expect the instrument sound or when to produce the sound themselves.

One of the primary goals of music for infants is to provide sensory stimulation as a foundation for cognitive

development and future learning. Consequently, you may not always see robustly overt behaviors from infants during musical experiences. Rather, their responses may be far more subtle in comparison with those of older children but are no less important. Behaviors you can expect include sustained gaze toward you as you sing or play an instrument, sound localization, and specific facial expressions such as wide-open eyes, raised eyebrows, or raised cheeks. Some infants may bounce, wave their arms, or kick their legs (known as “cycling”) during music. By contrast, infants may sometimes cease all physical movement during music and appear to be frozen or even hypnotized; this is a behavior known as “stilling” (Moog, 1976). Vocally, infants may giggle, coo, buzz, babble, squeal, or simply remain silent. All of these behaviors indicate that the infant is attending to the stimulus and most likely wants it to continue.

If an infant has special needs such as a developmental disability or medical condition, the same responses can be expected; however, they may appear more slowly or require more time to develop. For any infant, be sensitive to signs of overstimulation or a desire to terminate the interaction, such as back-arching, crying, gaze aversion (e.g., hiding the face or sharply turning the head 90 degrees away from caregiver), and other forms of self-regulation (e.g., rubbing the eyes). Infants may also grimace, frown, or clench their eyes shut (Standley, 1991; Standley & Whipple, 2003). If these behaviors occur, the musical stimulation should either be stopped or modified to better suit the infant's current state. Infants who have undergone painful medical procedures may also be wary of new adults and may have a low tolerance for physical contact. In this situation, try initially presenting music from a distance, then increase proximity and physical contact as the infant allows.

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